Subpart 54.01—General Requirements

§ 54.01–1 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a). To enforce any edition other than that specified in paragraph (b) of this section, the Coast Guard must publish notice of change in the FEDERAL REGISTER and make the material available to the public. All approved material is on file at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC, and at the U.S. Coast Guard, Office of Design and Engineering Standards (G–MSE), 2100 Second Street SW., Washington, DC 20593–0001 and is available from the sources indicated in paragraph (b) of this section.

(b) The material approved for incorporation by reference in this part and the sections affected are:

American Society of Mechanical Engineers (ASME)

United Engineering Center, 345 East 47th Street, New York, NY 10017

Boiler and Pressure Vessel Code, section VIII, Division 1, Pressure Vessels, July 1989 with 1989 addenda 54.01–2; 54.01–5; 54.01–15; 54.01–18; 54.01–25; 54.01–30; 54.01–35; 54.03–1; 54.03–5; 54.05–1; 54.10–1; 54.10–3; 54.10–5; 54.10–10; 54.10–15; 54.15–1; 54.15–5; 54.15–10; 54.15–13; 54.20–1; 54.20–3; 54.25–1; 54.25–3; 54.25–5; 54.25–8; 54.25–10; 54.25–15; 54.25–20; 54.25–25; 54.30–3; 54.30–5; 54.30–10

American Society for Testing and Materials (ASTM)

1916 Race Street, Philadelphia, PA 19103

ASTM A–20, Steel Plates for Pressure Vessels, 1980 .....54.25–10

ASTM A–203, Pressure Vessel Plates, Alloy Steel, Nickel, 1980.....54.05–20

ASTM A–370, Mechanical Testing of Steel Products, 1977.....54.25–20

ASTM E–23, Notched Bar Impact Testing of Metallic Materials, 1980.....54.05–5

ASTM E–208, Conducting Drop-Weight Test to Determine Nil-Ductility Transition Temperature of Ferritic Steels, 1969.....54.05–5

Compressed Gas Association (CGA)

500 Fifth Avenue, New York, NY 10036

S–1.2, Safety Relief Device Standards—Cargo and Portable Tanks for Compressed Gases, 1979.....54.15–25

S–1.2.5.2, Flow Test of Safety Relief Valves, 1979 .....54.15–10

Manufacturers Standardization Society (MSS)

127 Park Street, NE. Vienna, VA 22180

SP–25, Standard Marketing System for Valves, Fittings, Flanges and Unions, 1978 .....54.01–25

[CGD 88–032, 56 FR 35822, July 29, 1991 as amended by CGD 95–072, 60 FR 50462, Sept. 29, 1995; CGD 95-027, 61 FR 26000, May 23, 1996; CGD 96-041, 61 FR 50727, Sept. 27, 1996]

§ 54.01–2 Adoption of division 1 of section VIII of the ASME Code.

(a) Pressure vessels shall be designed, constructed, and inspected in accordance with division 1 of section VIII of the ASME (American Society of Mechanical Engineers) Code, as limited, modified, or replaced by specific requirements in this part. The provisions in the appendices to division 1 of section VIII of the ASME Code are adopted and shall be followed when the requirements in section VIII make them mandatory. For general information Table 54.01–1(a) lists the various paragraphs in division 1 of section VIII of the ASME Code which are limited, modified, or replaced by regulations in this part.

TABLE 54.01–1(a)—LIMITATIONS AND MODIFICATIONS IN THE ADOPTION OF DIVISION 1 OF SECTION VIII, ASME CODE

Paragraphs in Section VIII, ASME Code [1] and disposition	Unit of this part
U–1 and U–2 modified by	54.01–5 through 54.01–16.
U–1(c) replaced by	54.01–5.
U–1(d) replaced by	54.01–5(a) and 54.01–15.
U–1(e) modified by	54.01–10.
U–1(h) replaced by	54.01–15.
UG–11 modified by	54.01–25.
UG–22 modified by	54.01–30.
UG–25 modified by	54.01–35.
UG–28 modified by	54.01–40.
UG–84 replaced by	54.05–1.
UG–90 through UG–103 modified by.	54.10–1.
UG–90 and UG–91 replaced by	54.10–3.
UG–92 through UG–103 modified by.	54.10–3.
UG–98 reproduced by	54.10–5.
UG–99 modified by	54.10–10.
UG–100 modified by	54.10–15.
UG–115 through UG–120 modified by.	54.10–1.
UG–116, except (k) replaced by	54.10–20(a).
UG–116(k) replaced by	54.10–20(b).
UG–117 replaced by	54.10–20(c).
UG–118 replaced by	54.10–20(a).

TABLE 54.01–1(a)—LIMITATIONS AND MODIFICATIONS IN THE ADOPTION OF DIVISION 1 OF SECTION VIII, ASME CODE—Continued

Paragraphs in Section VIII, ASME Code [1] and disposition	Unit of this part
UG–119 modified by	54.10–20(d).
UG–120 modified by	54.10–25.
UG–125 through UG–134 modified by.	54.15–1 through 54.15–15.
UG–125 modified by	54.15–5.
UG–125 modified by	54.15–10, 54.15–15.
UG–127 modified by	54.15–13.
UW–1 through UW–65 modified by	54.20–1.
UW–2(a) replaced by	54.01–5(b) and 54.20–2.
UW–2(b) replaced by	54.01–5(b).
UW–9, UW–11(a), UW–13, UW–16 modified by.	54.20–3.
UW–11(a) modified by	54.25–8.
UW–26, UW–27, UW–29, UW–47, UW–48 modified by.	54.20–5.
UW–52(c)(3) replaced by	54.20–10.
UB–1 modified by	54.23–1
UB–2 modified by	52.01–95(d) and 56.30–30(b)(1).
UCS–6 modified by	54.25–3.
UCS–25 replaced by	54.25–5.
UCS–56 modified by	54.25–7.
UCS–57, UNF–57, UHA–33, and UHT–57 modified by.	54.25–8.
UCS–65 through UCS–67 replaced by.	54.25–10.
UHA–23(b) and UHA–51 modified by.	54.25–15.
UHT–5(c), UHT–6, UHT–23 modified by.	54.25–20.
UHT–82 modified by	54.25–20, 54.25–25.
UA–60 modified by	54.15–3.

[1] The references to specific provisions in the ASME Code are coded. The first letter ''U'' refers to division 1 of section VIII. The second letter, such as ''G'', refers to a subsection within section VIII. The number refers to the paragraph within the subsection.

(b) References to the ASME Code, such as paragraph UG–125, indicate:

U=Division 1 of section VIII, Pressure Vessels, ASME Code.
G=Part containing general requirements.
125=Paragraph within part.

(c) When a paragraph or a section of the regulations in this part relates to material in division 1 of section VIII of the ASME Code, the relationship with the code will be shown immediately following the heading of the section or at the beginning of the paragraph as follows:

(1) (Modifies U———.) This indicates that the material in U——— is generally applicable but is being altered, amplified or augmented.

(2) (Replaces U———.) This indicates that U——— does not apply.

(3) (Reproduces U———.) This indicates that U——— is being identically reproduced for convenience, not for emphasis.

[CGFR 68–82, 33 FR 18828, Dec. 18, 1968, as amended by CGFR 69–127, 35 FR 9976, June 17, 1970; CGFR 72–59R, 37 FR 6188, Mar. 25, 1972; CGD 72–206R, 38 FR 17226, June 29, 1973; CGD 73–254, 40 FR 40163, Sept. 2, 1975; CGD 77–147, 47 FR 21809, May 20, 1982; CGD 85–061, 54 FR 50963, Dec. 11, 1989. Redesignated by CGD 88–032, 56 FR 35822, July 29, 1991]

§54.01–5 Scope (Modifies U–1 and U–2).

(a) This part contains requirements for pressure vessels. Table 54.01–5(a) gives a breakdown by parts in this subchapter of the regulations governing various types of pressure vessels, boilers, and thermal units.

(b) Pressure vessels are divided into Classes I, I–L (low temperature), II, II–L (low temperature), and III. Table 54.01–5(b) describes these classes and sets out additional requirements for welded pressure vessels.

(c) The requirements for pressure vessels by class are as follows:

(1) Class I–L and II–L pressure vessels must meet the applicable requirements in this part.

(2) Pressure vessels containing hazardous materials as defined in §150.115 of this chapter must meet the requirements of this part or, as applicable, the requirements in 49 CFR parts 171–177 or part 64 of this chapter.

(3) Except as provided in paragraph (c)(4) of this section, Classes I, II, and III pressure vessels not containing hazardous materials must be designed and constructed in accordance with the requirements in Section VIII, division 1, of the ASME Code and must be stamped with the ASME ''U'' symbol. These pressure vessels must also comply with the requirements that are listed or prescribed in paragraphs (d) through (g) of this section. Compliance with other provisions in this part is not required.

(4) Classes II and III pressure vessels that have a net internal volume of less than 0.14 cubic meters (5 cubic feet) and do not contain hazardous materials must be stamped with either the ASME ''U'' or ''UM'' symbol. Compliance with other provisions in this part is not required.

(d) Pressure vessels described in paragraph (c)(3) of this section must—